

REMARKS

In the Office Action, claims 1-58 were rejected. Claims 1, 6, 7, 11, 20, 28, 33, 34, 38, and 58 have been amended. Claims 5 and 32 have been canceled. Claims 1-4, 6-31, and 33-58 remain pending. Applicants request reconsideration of the pending claims.

I. Claim Rejections – 35 USC 102

Claims 1-2, 5, 12-15, 28, 29, 32, 37, 39-42, and 58 were rejected under 35 USC 102 as being anticipated by US Patent No. 5,831,446 (the So reference).

Independent claims 1, 28, and 58 have been amended to recite, “the test structures in a padgroup are electrically tested together in parallel.” Note, these claims do not only recite that the test structures are electrically tested together or that the test structures are electrically tested in parallel. Instead, these claims recite that the test structures are electrically **tested together in parallel**.

The thirty chains disclosed in the So reference are first **tested together in series**. If a fault is detected during the serial testing, then the thirty chains are **connected in parallel** and tested to localize the fault. The So reference, however, does not disclose that the 30 outputs of the thirty chains are arranged as a padgroup or that the 30 chains are **tested together when they are connected in parallel**.

In particular, column 4, lines 15-17 disclose, “all thirty chains of FIG. 4 are connected together serially in one long chain in a serial mode.” Column 4, lines 17-18 disclose, “[i]n this serial connection, the only output signal of test chip 120 will be output signal Chain_Out<29>.” Thus, in the serial mode, all thirty chains are tested together in series using the output signal of the end of the chain (i.e., Chain_Out<29>).

Column 4, lines 24-26 disclose, “[i]f errors are detected during testing [the serial testing] of the test chip, the thirty chains may be connected in parallel to one another....” Column 4, lines 32-34 disclose, “[t]here will thus be thirty output signals Chain_Out<0>...Chain_Out<29>, one for

each chain circuitry 152.” The thirty outputs signals are provided on output pads 130, which are depicted in FIGs. 3A and 3B.

The thirty output pads of the thirty chains, however, are not depicted in FIGs. 3A and 3B as being arranged as a padgroup. The So reference also does not explicitly disclose that the thirty chains are tested together when they are connected in parallel. Instead, the So reference only explicitly discloses testing the thirty output pads together when they are connected in series.

Thus, Applicants assert that claims 1, 28, and 58 are allowable over the So reference. Applicants also assert that claims 2, 5, 12-15, 29, 32, 37, 39-42, which variously depend from claims 1 and 28, are allowable for at least the reason that they depend from allowable independent claims.

II. Claim Rejections – 35 USC 103

Claims 3, 4, 30, 31, and 43-45 were rejected under 35 USC 103(a) over the So reference in view of US Patent No. 6,291,254 (the Chou reference). These claims variously depend from independent claims 1 and 28, which are allowable over the So reference for at least the reasons set forth above. Thus, Applicants assert that claims 3, 4, 30, 31, and 43-45 are allowable for at least the reason that they depend from allowable independent claims.

Claims 6-11, 18-20, 33-38, and 48-50 were rejected under 35 USC 103(a) over the So reference in view of US Patent No. 5,666,049 (the Yamada reference). These claims variously depend from independent claims 1 and 28, which are allowable over the So reference for at least the reasons set forth above. Thus, Applicants assert that claims 6-11, 18-20, 33-38, and 48-50 are allowable for at least the reason that they depend from allowable independent claims.

Claims 16, 17, 46, and 47 were rejected under 35 USC 103(a) over the So reference in view of UPAP 2004/0094762 (the Hess reference). These claims variously depend from independent claims 1 and 28, which are allowable over the So reference for at least the reasons set forth above.

Thus, Applicants assert that claims 16, 17, 46, and 47 are allowable for at least the reason that they depend from allowable independent claims.

Claims 21-25 and 51-55 were rejected under 35 USC 102(a) over the So reference in view of the Yamada reference and the Kim reference. These claims variously depend from independent claims 1 and 28, which are allowable over the So reference for at least the reasons set forth above. Thus, Applicants assert that claims 21-25 and 51-55 are allowable for at least the reason that they depend from allowable independent claims.

III. Claims 26, 27, 56, 57

Claims 26, 27, 56, and 57 are not discussed in the Office Action. If these claims are rejected on the basis of the So reference, Applicants assert that these claims are allowable for at least the reason that they depend from independent claims 1 and 28, which are allowable over the So reference.

IV. Conclusion

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. **524322000300**. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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